

**5.13.2.2 DIAPHRAGMS****AASHTO & Bulb Tee Girders**

Permanent concrete diaphragms or end beams shall be placed at the ends of each span. Intermediate concrete diaphragms shall be placed as follows:

<u>Span Length</u>	<u>Diaphragm Location</u>
40' – 80'	Midspan
80' – 120'	$\frac{1}{3}$ points
> 120'	$\frac{1}{4}$ points

**Deep Bulb Tee Girders**

66 inch and deeper bulb tee girders shall have temporary diaphragms installed between the exterior and first interior girder. These diaphragms shall be placed midway between all permanent diaphragms as well as the end beams before pouring the permanent diaphragms and end beams. Temporary diaphragms shall be removed after the deck overhang brackets have been removed.

**Expansion Ends**

To facilitate jacking for future repairs at simply-supported ends of precast, prestressed girder bridges, the end diaphragms shall be designed for a minimum clearance of 10 inches above the level of the beam seats on piers and abutments. No extra reinforcement is required beyond that provided for normal dead, live and impact loads.

**Continuous Ends**

The end of girders in bridges designed without expansion joints shall be cast into full-depth end diaphragms.